NOVEMBER 2016 SEMIANNUAL GROUNDWATER MONITORING REPORT

FORMER GENERAL INSTRUMENT CORPORATION SITE – HICKSVILLE, NY

May 5, 2017

WSP | PARSONS BRINCKERHOFF

United States Coast Guard Headquarters ©Judy Davis/Hoachlander Davis Photography

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FORMER GENERAL INSTRUMENT CORPORATION SITE – HICKSVILLE, NY

May 5, 2017

Client

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Niagara Falls, NY 14304

Consultant

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1 Introduction

On behalf of Vishay GSI, Inc. (VGSI), WSP USA Corp. is pleased to present this *November 2016 Semiannual Groundwater Monitoring Report* for the former General Instrument Corporation (GIC) site located in Hicksville, New York (Figure 1).

Historical releases of solvents from the former GIC site, as well as documented releases from numerous other sites, have contributed to regional groundwater plumes of volatile organic compounds (VOCs). A known source of VOCs, the former Sylvania Electric Products, Inc. facility, is located immediately north and upgradient of the former GIC site at 70-140 Cantiague Rock Road. Figure 2 shows the locations of several facilities near the former GIC site known to have historically used chlorinated solvents.

VGSI, the corporate successor to GIC, is currently conducting all investigative and remedial work associated with the former GIC site in accordance with the Order on Consent (#W1 0236 88 07) signed by GIC on December 4, 1989, and the New York State Department of Environmental Conservation (NYSDEC) on January 16, 1990. In 2010, the NYSDEC referred the regional VOC plumes to the U.S. Environmental Protection Agency (EPA) for potential listing on the National Priorities List (NPL). On September 16, 2011, the New Cassel/Hicksville Groundwater Contamination Site was finalized onto the NPL (EPA ID# NYD0001095363). In August 2013, the EPA contacted VGSI and requested information pursuant to Section 104(e) of the Comprehensive Environmental Response and Compensation Liability Act (CERCLA). VGSI responded to the USEPA's request in a letter dated September 27, 2013.

The purpose of this report is to summarize data collected to monitor the migration of VOCs in groundwater originating from the former GIC site while the remedial investigation/feasibility study (RI/FS) process is being completed. Because releases at the former Sylvania site occurred immediately upgradient of the former GIC site, the plumes from the two sites have partially commingled. In addition, as the monitoring network extends offsite approximately 4,600 feet into a historically industrial area, some of the detected VOCs are also likely attributable to sources other than the former GIC and former Sylvania sites.

This report was prepared in accordance with the *Interim Groundwater Monitoring Plan* (IGMP; ESC Engineering 2004) as modified by the changes to the monitoring program that have been documented in previous groundwater monitoring reports. Water level data were collected from 35 monitoring wells (including the two sentinel wells) to evaluate the potentiometric surface in the area, and groundwater samples were collected from 22 monitoring wells (including the two sentinel wells and the Phase VI Remedial Investigation [RI] wells) and analyzed for VOCs.

1.1 Site Description and Ownership History

The former GIC site is located at 600 West John Street, northeast of the intersection of West John Street and Cantiague Rock Road in Hicksville, New York (Figure 1). The 11.5 acre site is located in a light industrial section of Hicksville and was developed in 1960 for General Transistor, who was subsequently acquired by GIC. GIC used the facility, including two, one-story buildings and one, two-story building, for the research, design, and manufacturing of semiconductors, radar systems, and electronic equipment until operations ceased in 1994. 600 West John LLC currently owns the property and leases the buildings to industrial and commercial tenants. The site is surrounded by industrial and commercial properties where similar VOCs were historically used, including the former Sylvania site, the former Hercules site, the former Anchor Chemical site, the Sulzer METCO site, the former Harris PRD site (now Westbury Realty), the former Depew Manufacturing site, the former Autoline Automotive site, and the 89 Frost Street site (Figure 2).

2 Groundwater Flow

The former GIC site is underlain by 1,100 feet of unconsolidated material and soils consisting of gravelly sand (0 to 40 feet below ground surface [bgs]), fine to medium sand (40 to 100 feet bgs), and silty fine sand (greater than 100 feet bgs). The Magothy formation, which underlies the Upper Glacial Aquifer, is the primary drinking water source for Long Island.

On November 28, 2016, water level measurements were collected from 35 groundwater monitoring wells[1] listed in Table 1 and shown on Figure 3. The water level data collected during this sampling event are provided in Table 1, while historical water level data are provided in Table 2. At the time the water level data were collected, the soil vapor extraction (SVE) system and the Interim Remedial Measure (IRM) system were not in operation.[2]

Water levels in November 2016 were approximately 3.05 feet lower on average than in May 2016. Since 2002, groundwater elevations have increased and have remained relatively stable with minor fluctuations since May 2010. The November 2016 elevations are approximately 6 feet higher than elevations measured in August 2002, when routine water level monitoring began.

Figure 4 depicts a composite potentiometric surface contour map based on select groundwater monitoring wells. The composite potentiometric surface was generated using the hydraulic heads of selected monitoring wells, which were chosen to coincide with the highest VOC concentrations measured in monitoring well clusters. Evaluating the analytical data in conjunction with the groundwater elevations allows an interpretation of how the VOCs are moving in groundwater within the investigation area. The groundwater contours represent the flow regime through which the constituents are migrating as they move horizontally and vertically downgradient. The groundwater flow direction illustrated by the composite potentiometric surface is predominantly south with some south by west and south by east flow vectors in the northern and shallower portions of the study area.

Water levels measured in monitoring well clusters also provide information on the vertical groundwater flow component within the aquifer. The vertical hydraulic gradients ($[dh/dl]v$) for the well clusters were calculated using the following equation:

Equation 1: $\left(\frac{dh}{dl}\right)v = \frac{(h2-h1)}{l}$

Where:

$h2$ = hydraulic head in the deeper well

$h1$ = hydraulic head in the shallower well

l = vertical distance between the center of the screens in the wells

Based on Equation 1, a negative vertical gradient indicates a downward flow direction and a positive vertical gradient indicates an upward flow direction.

Vertical gradients were calculated from water level measurements in well clusters W-03, W-19, W-20, W-25, W-36, and W-37. In the shallow portion of the aquifer, the vertical gradient for the W-03 well cluster was -0.0030 feet per foot (ft/ft). For well clusters screened in both the shallow and intermediate portions of the aquifer, the vertical gradients are 0.0000, -0.0035 and -0.0016 ft/ft for well clusters W-19, W-20, and W-25, respectively. For the intermediate and deeper portions of the aquifer, the gradients are -0.005 and -0.0022 ft/ft for well clusters W-36 and W-37, respectively. With the exception of the monitoring well clusters W-10 and W-12, the vertical gradients indicate a downward component to the groundwater flow direction, which is consistent with the interpretation

[1] Three monitoring wells (W-10-71, W-11-70, and W-12-70) historically included in the water level monitoring program were covered during paving activities between the May 2015 and November 2015 monitoring events. Two wells (W-10-71 and W-12-70) were uncovered and re-surfaced prior to the May 2016 sampling event. The third well, W-11-70, could not be repaired. Monitoring well W-05-78 was damaged between May and November of 2016. Monitoring well W-27-240 was inaccessible in November 2016.

[2] Operation of Unterdruck-Verdampfer-Brunner well (UVB-1) was effectively stopped on June 4, 2008, due to the uncontrollable flow of very fine grained sand into the well. Wells UVB-2 and UVB-3 were manually turned off on May 20, 2009. The SVE system was turned off on September 19, 2012 in preparation for soil verification sampling. The soil analytical results demonstrated that operation of the SVE system has achieved the soil remedial goals. Therefore the SVE system has not been restarted and remains off.

presented in Figure 4. The magnitude and direction of the vertical gradients observed in November 2016 were generally similar to those observed in May 2016.

3 Onsite Groundwater Monitoring Results and Trend Analysis

During the November 2016 sampling event, five groundwater monitoring wells were sampled on the former GIC site. Four of these wells are screened less than 120 feet bgs (W-01-75, W-10-120, W-22-95, and W-32-110), and onsite monitoring well W-14-150 is screened in the intermediate interval between 120 and 200 feet bgs. In addition, one equipment blank and one trip blank were collected for quality assurance/quality control (QA/QC) purposes. All of the samples were analyzed for VOCs, including dichlorobenzenes (DCBs), by USEPA Method 8260C. The samples were packaged and transferred via courier to the TestAmerica laboratory in Edison, New Jersey for analysis. A standard 2-week turnaround timeframe was requested.

The results of the VOC analyses from onsite groundwater samples (including the trip blank and equipment blank) collected in November 2016 are summarized in Table 3. Available historical VOCs concentrations detected in samples from these wells are included on Table 4. A Level I laboratory analytical report for these samples can be found in Appendix A, while a Data Usability Summary Report (with annotated Form 1s and support documentation) is included in Appendix B. A complete Level IV Laboratory Report with laboratory QA/QC data is included in Appendix C. Cross-section locations and schematics depicting the screened intervals of the wells and respective VOCs concentrations are presented on Figures 5 and 6, respectively. No VOCs were detected in the equipment blank or trip blank QA/QC samples.

Similar to previous sampling events, PCE and TCE were the predominant compounds detected in the samples collected from the five onsite wells. PCE was detected above reporting limits in each of the samples from the onsite monitoring wells, with a maximum concentration of 520 µg/l detected in the sample from W-32-110. This result continues an increasing trend of PCE that began in 2013, and is the highest PCE concentration detected in a sample from W-32-110 since 2007. TCE was detected above the reporting limit in samples from four onsite monitoring wells: W-01-75 (64 µg/l), W-10-120 (2.3 µg/l), W-22-95 (19 µg/l) and W-32-110 (0.63 µg/l). 1,2-DCB was detected above the reporting limit in the sample from one monitoring well W-01-75 (77 µg/l). Generally, VOC concentrations remain significantly below historical highs for all onsite wells.

4 Offsite Groundwater Monitoring

During the November 2016 sampling event, samples were collected from 17 offsite monitoring wells, including the 2 sentinel wells and 4 additional wells installed as part of the Phase VI RI. Blind duplicate samples labeled W-100 and W-101 were collected from offsite monitoring wells W-16-148 and W-27-285, respectively. Monitoring well W-23-110 is the only sampled offsite monitoring well screened less than 120 feet bgs. Five sampled wells are screened between 120 and 200 feet bgs, while the remaining 11 sampled wells are screened at depths greater than 200 feet bgs. The samples were analyzed by TestAmerica of Edison, New Jersey, for VOCs, including DCBs, using EPA Method 8260C within a standard 2-week turnaround time.

A summary of analytical results for the November 2016 samples collected from the offsite monitoring wells is presented in Table 3 and on Figure 6, while available historical sampling results are provided in Table 4. A Level I laboratory analytical report for these samples can be found in Appendix A, while a Data Usability Summary Report (with annotated Form 1s and support documentation) is included in Appendix B. A complete Category B Laboratory Report with laboratory QA/QC data is included in Appendix C.

4.1 Northern King Kullen Property Wells

Two offsite monitoring wells located on the northern portion of the King Kullen property (W-16-148 and W-23-110; Section A-A' on Figures 5 and 6) were sampled in November 2016. A blind duplicate sample labeled W-100 was collected from well W-16-148 for QA/QC purposes. PCE and TCE were the predominant VOCs detected in samples from both wells. 1,2-DCB was not detected above reporting limits in samples collected from either well.

The PCE concentration in the sample collected from monitoring well W-16-148[3] decreased from 3,700 to 1,800 µg/l between May and November 2016, and the TCE concentration decreased from 54 to 13 µg/l. The relative percentage of PCE in samples from well W-16-148 continues to be high (67.6 to 99.2 percent with a one-time outlier of 25.7 percent during the initial sampling of this well in May 1997). The historically high relative percentage of PCE together with the general absence of 1,2-DCB in the samples from monitoring well W-16-148 indicates a primary source other than the former GIC site.

The PCE and TCE concentrations in the sample collected in November 2016 from monitoring well W-23-110 remained similar to the concentrations reported in May 2016. PCE concentrations decreased slightly from 44 µg/l to 41 µg/l, while the TCE concentration increased slightly from 1.4 µg/l to 1.5 µg/l.

4.2 Southern King Kullen Property Wells

Six offsite monitoring wells were sampled along the southern boundary of the King Kullen property (W-18-150, W-19-150, W-20-160, and W-34-285; Section B-B' on Figure 6) and on the former Harris PRD site to the west (W-24-260 and W-25-188).

Similar to previous sampling events, PCE and TCE were detected above reporting limits in samples from each of these wells. 1,2-DCB was detected above reporting limits in five of the six wells (W-18-150, W-20-160, W-24-260, W-25-188, and W-34-285). Similar to historical trends, 1,2-DCB was not detected in monitoring well W-19-150, the easternmost well in the transect. The PCE concentration in the sample from W-19-150 decreased from 350 µg/l in May 2016 to 300 µg/l in November 2016, the lowest concentration reported in samples collected from this well since 2001.

Similar to the well transects located upgradient, the historical relative percentage of PCE ranged from 57 to 92 percent for the westernmost well (W-24-260) and from 72.8 to 97.2 percent for the easternmost well (W-19-150). These results, together with either non-detectable or very low concentrations of 1,2-DCB in the samples from these two wells, indicate a primary source other than the former GIC site. It should be noted that Harris PRD (formerly PRD Electronics) produced microwave test equipment on the current Westbury Realty property during a time period that overlapped with GIC's historical manufacturing operations. Based on publicly available databases, Harris PRD was a generator of D001 (ignitable), D002 (corrosive), F001 (spent halogenated solvents used in

[3] The results reported in the text represent the maximum result reported in either the primary sample or its duplicate. Both values are shown in Table 3.

degreasing), F002 (spent halogenated solvents), K095 (distillation bottoms from the production of 1,1,1-trichloroethane [TCA]), and U009 (2 propenenitrile or acrylonitrile) wastes. In addition, historical aerial photographs show a recharge basin on the former Harris PRD site. Despite these operational practices, according to publicly available databases, no subsurface investigations have been completed on the site other than those completed by VGSI.

4.3 Ackerman and NYS Park Service Property Wells

In November 2016, three offsite monitoring wells were sampled along the southern boundary of the Ackerman property (W-26-270, W-27-285, and W-30-285)[4] as shown in Section C-C' on Figure 6. The three monitoring wells on the eastern boundary of the NYS Park Service property (W-35-240, W-35-315, and W-35-380), which were previously included in the IGMP, were damaged during activities related to the construction of the Neptune^{RTS} converter station and were subsequently abandoned with the approval of the NYSDEC in May 2007. A blind duplicate sample labeled W-101 was also collected from well W-27-285 for QA/QC purposes.

Similar to previous sampling events, PCE, TCE, and cis-1,2-dichloroethene (DCE) were the predominant compounds detected in samples from these wells. The PCE concentration decreased in samples from two of these wells, with the exception of W-26-270, which increased from 78 to 110 µg/l from May to November 2016. Similar to the line of easternmost upgradient wells, W-12-120, W-16-148, and W-19-150, the relative percentage of PCE in wells W-26-270 and W-30-285 continues to range from 77.8 to 100 percent (with one outlier of 66.5 percent in well W-30-285 during the initial sampling event in August 2002), indicating a source other than the former GIC site. Vinyl chloride was detected in two of the three wells at concentrations ranging from 1.2 µg/l in monitoring well W-30-285 to 27 µg/l in the sample from monitoring well W-27-285. Generally, as the depth and downgradient distance from the former GIC site increases, the presence of vinyl chloride, a degradation product of PCE and TCE, also increased. 1,2-DCB was detected above the reporting limit in samples from each of these wells at concentrations similar to historical results.

4.4 Sentinel Wells

During this sampling event, the two sentinel wells (S-1-325 and S-1-450), located in Park H 9 south of the site, were also sampled. While several VOCs were detected in these wells at concentrations above reporting limits, 1,2-DCB was again not detected in samples collected from either of the sentinel wells. PCE and TCE were the predominant compounds detected. From May to November 2016, the PCE concentration decreased (from 32 to 27 µg/l) and TCE concentration increased slightly (from 14 to 15 µg/l) for S-1-325. The concentrations of both PCE and TCE increased in the samples collected from S-1-450, from 480 to 900 µg/l for PCE and from 120 to 170 µg/l for TCE, both historical highs.

4.5 Phase VI RI Wells

In November 2008, four additional groundwater monitoring wells (W-36-390, W-36-448, W-37-325, and W-37-385) were installed as part of the Phase VI RI. The wells were initially sampled in March 2009 and have been incorporated into the semiannual groundwater sampling events. The predominant compounds detected in samples from these wells have been PCE, TCE, and cis-1,2-DCE with higher concentrations detected for the shallower wells.

The PCE concentration in the sample collected from W-36-390 increased from May to November 2016 (from 110 to 140 µg/l), while the TCE concentration decreased (from 1,300 to 1,100 µg/l). Both results are similar to previously detected concentrations in this well. The concentrations of both PCE and TCE decreased in the sample collected from W-36-448, from 54 µg/l to 38 µg/l and 130 µg/l to 120 µg/l, respectively.

Both PCE and TCE concentrations decreased from May to November 2016 in samples collected from the W-37 well cluster. PCE decreased from 120 µg/l to 84 µg/l in samples collected from the shallower well (W-37-325) and

[4] WSP was unable to access monitoring well MW-27-240 to collect a groundwater sample during the November 2016 sampling event.

from 65 µg/l to 53 µg/l in samples from the deeper well (W-37-385). Similarly, TCE concentrations decreased in samples from both wells: from 240 µg/l to 120 µg/l for W-37-325 and 74 µg/l to 43 µg/l for W-37-385.

5 Conclusions and Adjustments to the Monitoring Program

The consistent general reduction in VOCs related to the former GIC site in groundwater samples collected onsite and at the northern King Kullen property line provide direct evidence of the success of the onsite source control measures. The high relative percentage of PCE contained in samples from many of the monitoring wells demonstrate that much of the VOCs detected in the monitored portion of the aquifer, including the highest concentrations, are attributable to offsite sources other than the former GIC site.

After each sampling event, WSP evaluates the conditions of the monitoring wells and the specified sampling program to determine if any wells should be recommended for addition to or deletion from the monitoring program. No changes to the existing sampling program are recommended at this time. The May 2017 sampling program is summarized in Table 5.

6 References

ESC Engineering of New York, P.C. 2004. Interim Groundwater Monitoring Plan, Former General Instrument Corporation Site, Hicksville, New York. June 3.

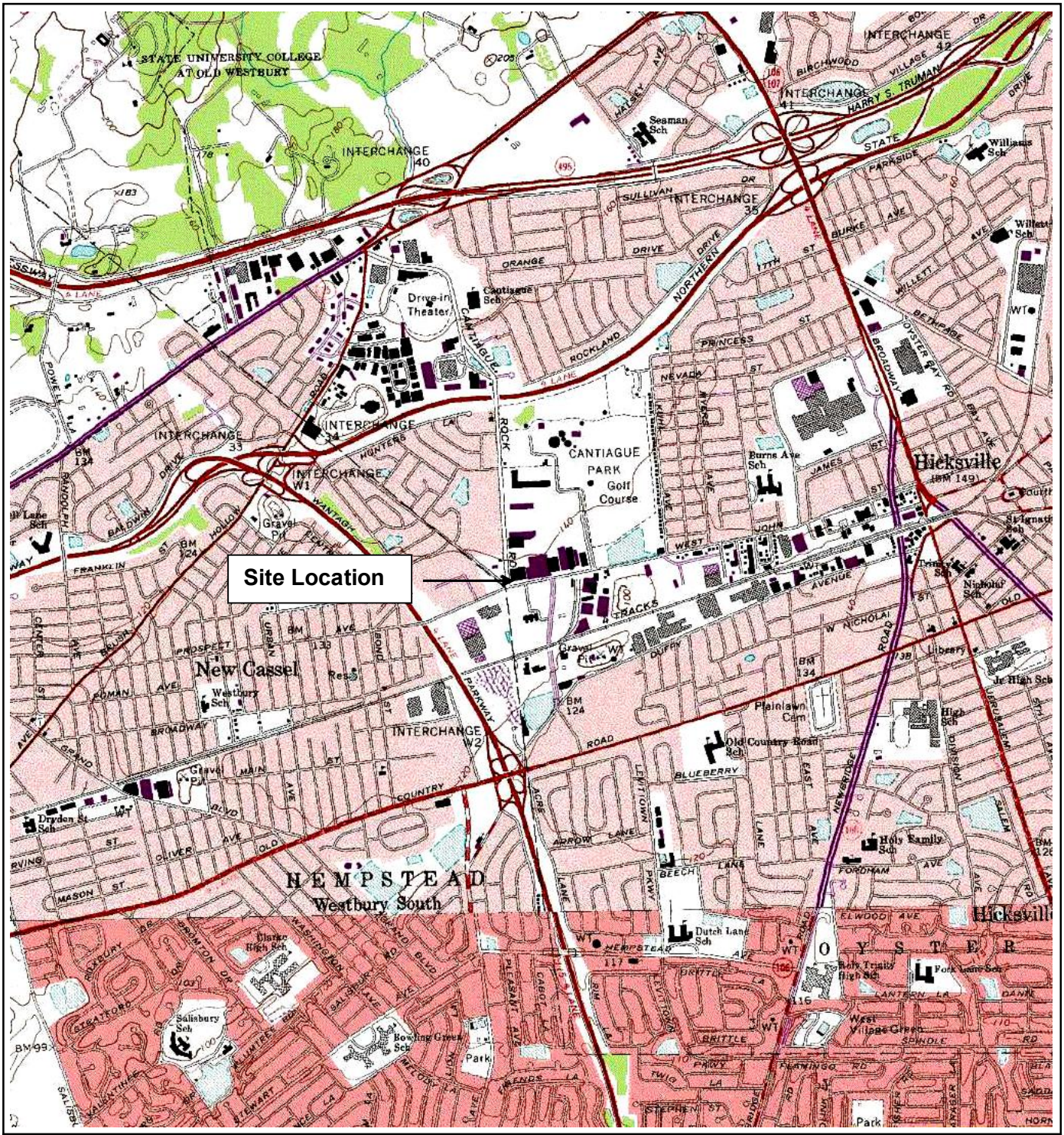
ELAP. 2013. SW 846 Methods to be Delisted on October 1, 2013. Email Communication to Laboratories from the New York State Department of Health-ELAP. May 5.

WSP USA Corp. 2014. May 2014 Semiannual Groundwater Monitoring Report, Former General Instrument Corporation Site, Hicksville, New York. January 10.

7 Acronyms

µg/l	micrograms per liter
bgs	below ground surface
CERCLA	Comprehensive Environmental Response and Compensation Liability Act
DCB	dichlorobenzene
DCE	dichloroethylene
ELAP	Environmental Laboratory Approval Program
EPA	U.S. Environmental Protection Agency
ft/ft	feet per foot
GIC	General Instrument Corporation
IGMP	Interim Groundwater Monitoring Plan
IRM	Interim Remedial Measure
MS/MSD	matrix spike/matrix spike duplicate
NPL	National Priorities List
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York Stated Department of Health
PCE	tetrachloroethylene
QA/QC	quality assurance/quality control
RI	Remedial Investigation
RI/FS	remedial investigation/feasibility study
SVE	soil vapor extraction system
TCA	trichloroethane
TCE	trichloroethylene
UVB	Unterdruck-Verdampfer-Brunner
VGSI	Vishay GSI, Inc.
VOCs	volatile organic compounds

Figures



WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426- 7330

Figure 1
Site Location
Former General Instrument Corporation Site
Hicksville, New York

E1

LEGEND

- GROUNDWATER CIRCULATION WELL
- MONITORING WELL
- DESTROYED OR DAMAGED WELL TO BE ABANDONED
- ABANDONED MONITORING WELL
- PROPERTY LINE
- PROPERTY LINE OF SITE WITH KNOWN CHLORINATED SOLVENT USE

NOTES:

1. PROPERTY BOUNDARIES ARE NOT SURVEYED AND ARE APPROXIMATE BASED ON DATA OBTAINED FROM NASSAU COUNTY DEPARTMENT OF ASSESSMENT WEBSITE ON AUGUST 10, 2005.

N

0 300 600 900

SCALE IN FEET

314V0225-009

Drawing Number

FIGURE 2

WSP | PARSONS BRINCKERHOFF

WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

SURROUNDING PROPERTIES

FORMER GENERAL INSTRUMENT CORPORATION SITE
HICKSVILLE, NEW YORK

PREPARED FOR

ASKIN & HOOKER, LLC
SPARTA, NEW JERSEY

DRAWN BY	EGC
CHECKED	JS 9/2/2016
APPROVED	

SEAL

DATE

REVISIONS

REV	DESCRIPTION		
1	Revised:	Chkd:	Appr.:
2	Revised:	Chkd:	Appr.:
3	Revised:	Chkd:	Appr.:

R:\ACAD\CADD_2015\150440-Hicksville\CAD\15R0440-007.dwg 9/27/2016 3:19 PM Usec01012

B

NOTES:

1. PROPERTY BOUNDARIES ARE NOT SURVEYED AND ARE APPROXIMATE BASED ON DATA OBTAINED FROM THE NASSAU COUNTY DEPARTMENT OF ASSESSMENT WEBSITE ON AUGUST 10, 2005 AND DECEMBER 7, 2009.

LEGEND

- GROUNDWATER CIRCULATION WELL
- SAMPLED MONITORING WELL
- MONITORING WELL (WATER LEVEL ONLY)
- DESTROYED OR DAMAGED WELL TO BE ABANDONED
- ABANDONED MONITORING WELL
- PROPERTY LINE
- RAILROAD TRACKS
- FENCE LINE

NASSAU COUNTY DPW
FORMER SYLVANIA SITE
W-03-112
W-03-72
W-08-71
W-07-70
FORMER ANCHOR CHEMICAL
AREA B – CLOSED (FORMER 1,000 GALLON UNDERGROUND WASTE SOLVENT TANK)
AREA A (FORMER 2,000 GALLON UNDERGROUND WASTE SOLVENT TANK)
FORMER GIC SITE
W-01-120
W-14-150
W-01-75
W-09-71
W-02-70
W-32-110
W-02-120
AREA C – CLOSED (FORMER TUNNEL SUMP)
ROCK ROAD
CANTIAGUE ROAD
CANTIAGUE LANE
W-11-70
W-22-95
W-12-120
W-12-70
WEST JOHN STREET
W-10-71
W-05-78
W-06-79
W-10-120
SULZER METCO SITE
W-31-95
W-16-148
W-17-130
W-15-168
W-13
PROSPECT AVENUE
FORMER PRD WELL 6202
KING KULLEN PROPERTY
W-23-110
FORMER HARRIS PRD SITE
FORMER PRD WELL 9341
APPROXIMATE LOCATION FORMER RECHARGE BASIN
NASSAU COUNTY DPW
W-24-260
W-19-110
W-19-150
W-18-150
W-34-285
W-20-120
W-20-160
W-21-150
W-21-180
W-25-150
W-25-188
WILLIAMS PROPERTY
CHARLOTTE AVENUE
NYS PARK SERVICE PROPERTY
ACKERMAN PROPERTY
W-26-270
UVB-3
W-30-285
W-27-240
UVB-1
W-27-285
W-28-262
W-35-380
W-35-315
W-35-240
NYSDOT SALT DOME
NASSAU COUNTY DPW RECHARGE BASIN
FORMER BOWE SYSTEMS
FORMER DEPEW MANUFACTURING
WANTAGH PARKWAY
GATE
UVB-2
DUFFY AVENUE
EZ-EM, INC.
FORMER AUTOLINE AUTOMOTIVE
89 FROST STREET SITE
W-37-325
W-37-385
FORMER APPLIED FLUIDICS
OLD COUNTRY ROAD
APEX LANE
ACRE LANE
APOLLO LANE
ARCH LANE
ARCADIA LANE
ADMIRAL LANE
ALPINE LANE
RESIDENTIAL
CARMAN AVENUE
CYPRESS LANE W
CYPRESS LANE E
W-36-390
W-36-448
S-1-325/S-1-450
RESIDENTIAL
ABBOT LANE

N

0 400 800

SCALE IN FEET

WSP | PARSONS BRINCKERHOFF
WSP USA Corp.
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Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

Figure 3

INTERIM SEMI-ANNUAL
GROUNDWATER MONITORING NETWORK

FORMER GENERAL INSTRUMENT CORPORATION SITE
HICKSVILLE, NEW YORK

PREPARED FOR
ASKIN & HOOKER, LLC
SPARTA, NEW JERSEY

Drawn By: EGC
Checked: DAC 2/16/2016
Approved:
DWG Name: 15R0440-007

R:\ACAD\CADD_314\31400225-Hicksville\CAD\314V0225-012.dwg 3/6/2017 9:12 AM USEC01012

B

NOTES:

1. PROPERTY BOUNDARIES ARE NOT SURVEYED AND ARE APPROXIMATE BASED ON DATA OBTAINED FROM THE NASSAU COUNTY DEPARTMENT OF ASSESSMENT WEBSITE ON AUGUST 10, 2005 AND DECEMBER 7, 2009.
2. GROUNDWATER DEPTHS WERE MEASURED ON NOVEMBER 28, 2016.

LEGEND

- GROUNDWATER CIRCULATION WELL
- MONITORING WELL (INCLUDED IN GROUNDWATER CONTOUR)
- MONITORING WELL (NOT INCLUDED IN GROUNDWATER CONTOUR)
- DESTROYED OR DAMAGED WELL TO BE ABANDONED
- ABANDONED MONITORING WELL
- PROPERTY LINE
- RAILROAD TRACKS
- FENCE LINE
- GROUNDWATER ELEVATION CONTOUR
- 72.36 GROUNDWATER ELEVATION

NASSAU COUNTY DPW
AREA A (FORMER 2,000 GALLON UNDERGROUND WASTE SOLVENT TANK)
FORMER SYLVANIA SITE
W-03-112
W-08-71
W-03-72 73.07
73.10
W-07-70
FORMER ANCHOR CHEMICAL
ROCK ROAD
CANTIAGUE
W-01-120
W-14-150
FORMER GIC SITE
W-01-75
72.97
W-09-71
W-02-70
W-02-120
W-32-110
72.85
AREA C – CLOSED (FORMER TUNNEL SUMP)
CANTIAGUE LANE
AREA B – CLOSED (FORMER 1,000 GALLON UNDERGROUND WASTE SOLVENT TANK)
W-11-70
W-22-95
72.61
W-06-79
W-12-70
WEST JOHN STREET
W-10-71
W-10-120
72.61
W-05-78
W-12-120
SULZER METCO SITE
W-31-95
W-16-148
72.36
W-17-130
W-15-168
PROSPECT AVENUE
W-13
KING KULLEN PROPERTY
FORMER PRD WELL 6202
W-23-110
72.10
FORMER HARRIS PRD SITE
APPROXIMATE LOCATION FORMER RECHARGE BASIN
FORMER PRD WELL 9341
NASSAU COUNTY DPW
W-24-260
W-19-110
W-19-150
71.60
W-34-285
W-18-150
W-20-120
W-20-160
71.45
W-21-150
W-21-180
W-25-150
71.18
W-25-188
WILLIAMS PROPERTY
CHARLOTTE AVENUE
NYS PARK SERVICE PROPERTY
ACKERMAN PROPERTY
W-26-270
UVB-3
70.37
W-30-285
NM
W-27-240
W-27-285
70.37
UVB-4
W-28-262
W-35-380
W-35-315
W-35-240
NYSDOT SALT DOME
NASSAU COUNTY DPW RECHARGE BASIN
FORMER DEPEW MANUFACTURING
WANTAGH PARKWAY
GATE
UVB-2
DUFFY AVENUE
EZ–EM, INC.
FORMER AUTOLINE AUTOMOTIVE
89 FROST STREET SITE
W-37-385
W-37-325
68.90
FORMER APPLIED FLUIDICS
OLD COUNTRY ROAD
APEX LANE
APOLLO LANE
ARCH LANE
RESIDENTIAL
ADMIRAL LANE
ALPINE LANE
CARMAN AVENUE
CYPRESS LANE W
CYPRESS LANE E
W-36-448
W-36-390
66.17
S-1-325/S-1-450
66.00
RESIDENTIAL

72.8 72.6 72.4 72.2 72.0 71.8 71.6 71.4 71.2 71.0 70.8 70.6 70.4 70.2 70.0 69.8 69.6 69.4 69.2 69.0 68.8 68.6 68.4 68.2 68.0 67.8 67.6 67.4 67.2 67.0 66.8 66.6 66.4 66.2

N

0 400 800
SCALE IN FEET

WSP | PARSONS BRINCKERHOFF
WSP USA Corp.
75 Arlington Street, 4th Floor
Boston, Massachusetts 02116
(617) 426-7330
www.wspgroup.com/usa

Figure 4

NOVEMBER 28, 2016 POTENTIOMETRIC SURFACE
COMPOSITE POTENTIOMETRIC SURFACE

FORMER GENERAL INSTRUMENT CORPORATION SITE
HICKSVILLE, NEW YORK

PREPARED FOR
ASKIN & HOOKER, LLC
SPARTA, NEW JERSEY

Drawn By: EGC 3/6/2017
Checked:
Approved:
DWG Name: 314V0225–012

R:\ACAD\CADD_2015\150440-Hicksville\CAD\15R0440-007.dwg 9/27/2016 3:19 PM Usec01012

B

NOTE: PROPERTY BOUNDARIES ARE NOT SURVEYED AND ARE APPROXIMATE BASED ON DATA OBTAINED FROM NASSAU COUNTY DEPARTMENT OF ASSESSMENT WEBSITE ON AUGUST 10, 2005 AND DECEMBER 7, 2009.

LEGEND
- GROUNDWATER CIRCULATION WELL
- SAMPLED MONITORING WELL
- MONITORING WELL (WATER LEVEL ONLY)
- DESTROYED OR DAMAGED WELL TO BE ABANDONED
- ABANDONED MONITORING WELL
- PROPERTY LINE
- RAILROAD TRACKS
- FENCE LINE

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK AND WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

NASSAU COUNTY DPW
FORMER SYLVANIA SITE
W-03-112
W-03-72
W-07-70
W-08-71
D
FORMER ANCHOR CHEMICAL
AREA A (FORMER 2,000 GALLON UNDERGROUND WASTE SOLVENT TANK)
AREA B – CLOSED (FORMER 1,000 GALLON UNDERGROUND WASTE SOLVENT TANK)
FORMER GIC SITE
W-01-120
W-09-71
W-02-70
W-14-150
W-01-75
W-32-110
W-02-120
AREA C – CLOSED (FORMER TUNNEL SUMP)
CANTIAGUE ROCK ROAD
CANTIAGUE LANE
W-11-70
W-22-95
W-12-120
W-12-70
A'
WEST JOHN STREET
W-10-71
W-10-120
W-05-78
W-06-79
A
SULZER METCO SITE
W-31-95
W-16-148
W-17-130
W-15-168
W-13
PROSPECT AVENUE
FORMER PRD WELL 6202
KING KULLEN PROPERTY
W-23-110
FORMER HARRIS PRD SITE
FORMER PRD WELL 9341
APPROXIMATE LOCATION FORMER RECHARGE BASIN
NASSAU COUNTY DPW
W-24-260
B'
B
W-19-110
W-19-150
W-18-150
W-34-285
W-21-150
W-21-180
W-20-120
W-20-160
W-25-150
W-25-188
WILLIAMS PROPERTY
CHARLOTTE AVENUE
C'
NYS PARK SERVICE PROPERTY
ACKERMAN PROPERTY
W-26-270
UVB-3
W-30-285
W-27-240
UVB-1
W-27-285
C
W-28-262
FORMER BOWE SYSTEMS
W-35-380
W-35-315
W-35-240
NYSDOT SALT DOME
NASSAU COUNTY DPW RECHARGE BASIN
FORMER DEPEW MANUFACTURING
WANTAGH PARKWAY
GATE
UVB-2
D'
DUFFY AVENUE
EZ-EM, INC.
FORMER AUTOLINE AUTOMOTIVE
89 FROST STREET SITE
W-37-325
W-37-385
FORMER APPLIED FLUIDICS
OLD COUNTRY ROAD
APEX LANE
ACRE LANE
APOLLO LANE
ARCH LANE
ARCADIA LANE
ADMIRAL LANE
ALPINE LANE
RESIDENTIAL
CARMAN AVENUE
CYPRESS LANE W
CYPRESS LANE E
W-36-390
W-36-448
RESIDENTIAL
S-1-325/S-1-450
ABBOT LANE

N

0 400 800
SCALE IN FEET

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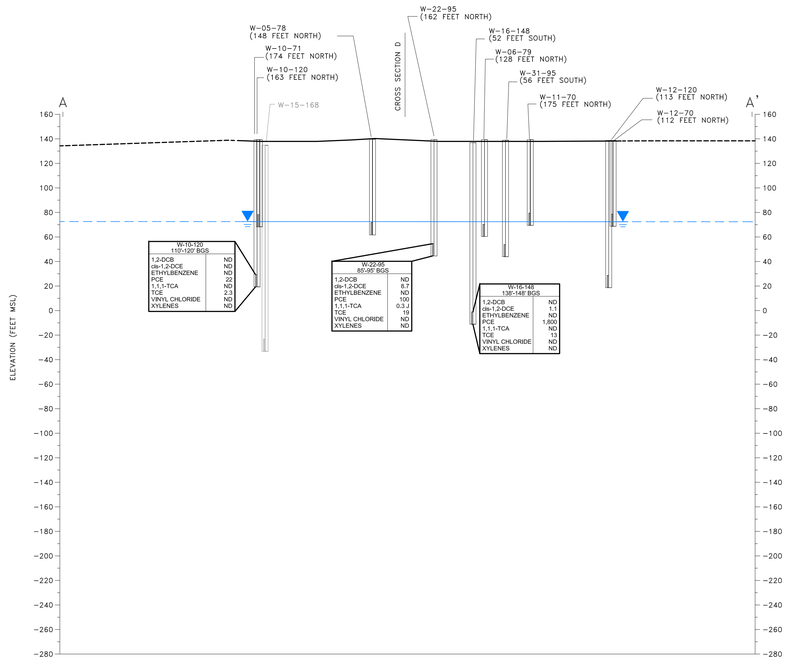
Figure 5

GEOLOGIC CROSS-SECTION LOCATIONS

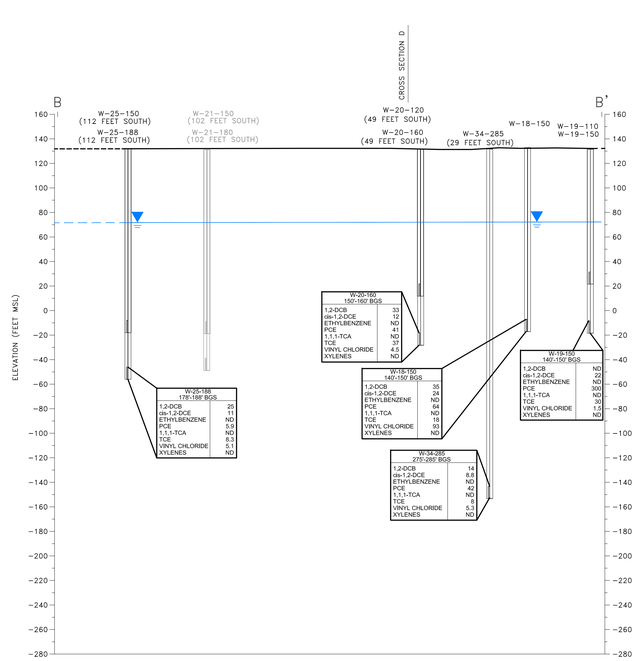
FORMER GENERAL INSTRUMENT CORPORATION SITE
HICKSVILLE, NEW YORK

PREPARED FOR
ASKIN & HOOKER, LLC
SPARTA, NEW JERSEY

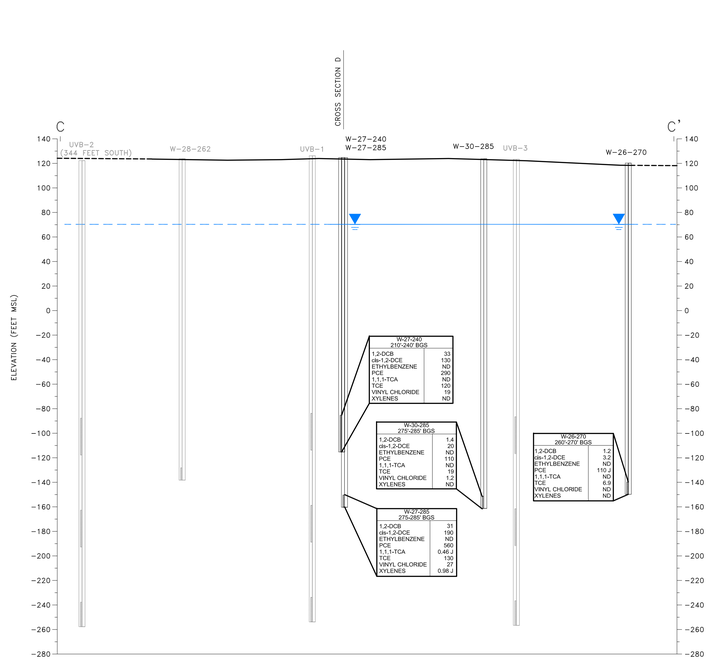
Drawn By: EGC
Checked: DAC 2/16/2016
Approved:
DWG Name: 15R0440-007



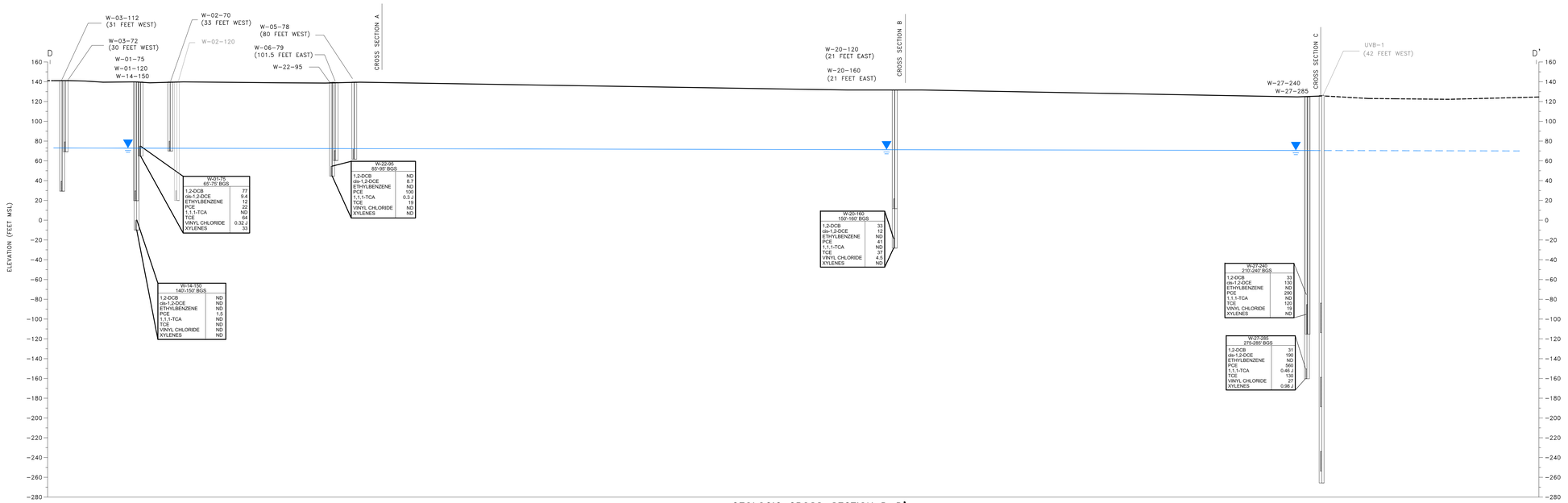
GEOLOGIC CROSS-SECTION A-A'



GEOLOGIC CROSS-SECTION B-B'



GEOLOGIC CROSS-SECTION C-C'



GEOLOGIC CROSS-SECTION D-D'

NOTES:
1. ALL CONCENTRATIONS ARE MEASURED IN UG/L.
2. OFFSETS ARE ONLY INDICATED IF DISTANCE BETWEEN CROSS-SECTION AND WELL IS GREATER THAN 20 FEET.
3. THE LOCATION OF THE POTENTIOMETRIC SURFACE IS APPROXIMATE BASED ON THE COMPOSITE POTENTIOMETRIC SURFACE SHOWN IN FIGURE 4.
4. GRAY LOCATIONS REPRESENT WELLS THAT HAVE BEEN DAMAGED OR DESTROYED. UVB-1, UVB-2, AND UVB-3 PIPING HAS BEEN REMOVED AND OPERATION HAS CEASED.
5. IF A BLIND DUPLICATE SAMPLE WAS COLLECTED, THE RESULT FROM THE SAMPLE WITH THE HIGHEST TOTAL VOCS CONCENTRATION WAS INCLUDED ON THIS FIGURE.
6. W-27-240 WAS NOT SAMPLED DURING THE NOVEMBER 2016 EVENT. CONCENTRATIONS ARE FROM THE MOST RECENT AVAILABLE DATA SET.

LEGEND
ND = NOT DETECTED ABOVE REPORTABLE LIMIT
J = ESTIMATED RESULT
POTENTIOMETRIC SURFACE (DASHED WHERE INFERRED)
TOPOGRAPHIC SURFACE (DASHED WHERE INFERRED)

0 100 200
HORIZONTAL SCALE IN FEET
0 50 100
VERTICAL SCALE IN FEET
2:1 VERTICAL EXAGGERATION

E1

REVISIONS

REV	DESCRIPTION		
1	Revised:	Date:	Appr:
2	Revised:	Date:	Appr:
3	Revised:	Date:	Appr:

SEAL

DRAWN BY EGC 9/6/2017
CHECKED
APPROVED

NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DRAWING IN ANY WAY.

DATE

GEOLOGIC CROSS-SECTIONS NOVEMBER 2016 SAMPLING RESULTS

FORMER GENERAL INSTRUMENT CORPORATION SITE
HICKSVILLE, NEW YORK

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FIGURE 6

Drawing Number
314V0225-013